

## ABSTRACT

[0039] A CAM device features matchlines which are coupled in series between a top current source, a bottom current source, and ground. The top current source is configured to supply a first current to the matchline and the bottom current source, while the bottom current source is configured to supply a second current to ground. The magnitude of the first current is limited by the operation of the CAM cells coupled to the matchline, and is duplicated by a current mirror architecture. The mirrored of the first current, known as the sense current, is coupled to a measurement circuit to measure the state of the matchline. This architecture features lower power consumption and faster matchline evaluations.